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Attorney Reference No. 2151-51823
Application No. 09/336,339
PATENT

165. The product of claim 162, wherein the face layer is e-beamed through its cross section.
166. The product of claim 162 further comprising grafting chemicals coupled to the face layer.
167. The product of claim 162, wherein the face layer is painted.--

REMARKS

A. *Restriction of Groups I and II*

The Examiner contends that Groups I and II are distinct as a product and a process for making the process because "the core member could have been preformed, and the face layer could have been supplied in solution form to its surface." Applicants traverse this restriction and request that it be withdrawn.

As stated by the Examiner, inventions are distinct if one of the following can be shown: (1) the process as claimed can be used to make other and materially different products or (2) the product as claimed can be made by another and materially different process. MPEP § 806.05(f). The Examiner, in his examples, has not shown either.

First, Applicants do not dispute the Examiner's contention that the "core member could have been preformed." However, the claimed process covers both a process in which a core is preformed and a process in which a core is formed in parallel with one or more face layers. This is described in Applicants specification:

Either or both of the first face and the second face may be formed previously. For example, the second face may be formed previously, and added to the upper surface of the core at an appropriate time. Alternatively, the first face may be formed previously, and the second face may be formed in parallel with the core and then added to the core. It also is possible to form the core separately from the faces, and then subsequently add the faces.

See page 32, lines 24-30 of Applicants' specification. (emphasis added). Applicants' specification clearly supports a process in which one or more layers (including a core layer) can be made previously (i.e., preformed) or simultaneously. In short, the Examiner has recited a specific, non-essential feature of Applicants' invention, not a materially different process, as required by MPEP § 806.05(f).

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In addition, claim 1 recites a method for forming a mat. The Examiner does not even contend that the mat of claim 1 requires a core layer or any additional layers added to a core layer (because it does not). If the mat of claim 1 comprises only one layer of material, then it is completely irrelevant whether or not the layer is "preformed." In other words, a layer can only be "preformed" with respect to a subsequently added layer. However, there is no requirement that the mat of claim 1 include a subsequently added layer.

As to the Examiner's contention that "the face layer could have been supplied in solution form to its surface," this contention is incorrect. First, a face layer is formed from, for example, a mixture of thermoplastic material and filler material (e.g., wood particles). The mixture of thermoplastic material and filler material would not be solubilized and added to a core in a solution. For example, flakes of plastic material do not dissolve when mixed in water.

Moreover, Applicants' method includes consolidating the face layer, such as by application of a hot gas, which causes the thermoplastic material to melt and flow around the filler material, thereby increasing the density of the face layer. See page 24, lines 24-25. Even assuming *arguendo* that the mixture of thermoplastic material and filler material would be provided in solution (which it cannot), then the solution itself would prevent any consolidation of the layer (i.e., melting of the thermoplastic material). In addition, the Examiner referred to the fact that the density of a solution decreases when heated (liquid expands as it is converted to a gas). Thus, if anything, the density of a solution of face layer material (assuming there is one) decreases when heated, which is the exact opposite of what occurs in Applicants' method. Further, such a solution would not be contained by a foraminous conveyor that is used to convey the mixture of thermoplastic and filler material for forming a face layer.

Thus, the claimed product cannot be made by a process in which a face layer is supplied in solution, as contended by the Examiner, and the restriction with respect to Groups I and II should be withdrawn. Applicants therefore request that Groups I and II be combined for examination in the present application.

B. Amendments to Claims

No new matter has been added by the amendments to the claims. Support for the term "filler" used in the claims is found at, for example, page 10, lines 20-24 of Applicants' specification. Support for the term "thermoplastic" used in the claims is found at, for example, page 11, lines 23-24 of Applicants' specification.

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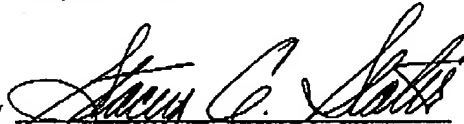
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The Examiner should call the undersigned attorney if there are any questions concerning this Amendment.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

By



Stacey C. Slater
Registration No. 36,011

One World Trade Center, Suite 1600
121 S.W. Salmon Street
Portland, Oregon 97204
Telephone: (503) 226-7391
Facsimile: (503) 228-9446

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**Marked-up Version of Amended Claims
Pursuant to 37 C.F.R. §§ 1.121(b)-(c)**

82. (Amended) A cellulosic and thermoplastic [thermoactive] composite product, comprising:

a core; and
at least one face layer.

93. (Amended) A cellulosic and thermoplastic [thermoactive] composite, comprising a first surface and a second surface, the composite having cellulosic fines adjacent the first and second surfaces, longer flakes adjacent the cellulosic fines and graduating to shorter flakes at a center portion of the product.

96. (Amended) A composite board product, comprising:
a core formed from a mixture of a filler [cellulosic] material and a thermoplastic material; and
at least one surface-treated face layer attached to at least one major surface of the core, the at least one face layer being formed from a mixture of a filler [cellulosic] material and a thermoplastic material.

103. (Amended) A composite product, comprising:
a first portion comprising a first core formed from a mixture comprising a filler [cellulosic] material and a thermoplastic material, and at least one face layer attached to at least one major planar surface of the first core, the at least one face layer being formed from a mixture of a filler [cellulosic] material and a thermoplastic material; and
a second portion bonded to the first portion, the second portion comprising a second core formed from a mixture comprising a filler [cellulosic] material and a thermoplastic material, and at least one face layer attached to at least one major planar surface of the second core, the at least one face layer being formed from a mixture of a filler [cellulosic] material and a thermoplastic material.

112. (Amended) A composite product, comprising:
a core formed from a mixture of a filler [cellulosic] material and a thermoplastic material; and

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at least one surface treated face layer attached to at least one major planar surface of the core, the at least one face layer being formed from a mixture of a filler [cellulosic] material and a thermoplastic material, the surface layer having grafting chemicals coupled thereto.

118. (Amended) A multi-layer composite product, comprising:
a preformed consolidated top layer comprising a filler material [cellulose] and a thermoplastic material;
a preformed consolidated bottom layer comprising a filler material [cellulose] and a thermoplastic material; and
a non-consolidated core section between the top and bottom layer.